

radiating antenna (1) and multiple thermocouples (6,6',6"), the radiating antenna being submerged within a fluid flow, characterized in that

said radiating antenna (1) [is] adapted to be submerged within a flow which proceeds through a central channel (2) surrounding said radiating antenna (1) towards the distal end of said catheter and passes from said catheter through a first opening (3) into a bladder to be treated, while flowing back into said catheter towards [the] a proximal end thereof through a second separate opening (4) of a side channel (5) surrounding [the] power supply cables of said thermocouples (6,6',6"),

[the] ends of said thermocouples (6,6',6") are adapted to project out of said second opening (4), being thus deflected outwards into the bladder when said balloon (7) is inflated by injecting a fluid through a second side channel (8) and third opening (9), whereby [the] outwardly deflected ends of said thermocouples (6,6',6") are adapted to come into tangential engagement with a bladder wall (32) irradiated by said antenna (1).

2. A radiating device including a catheter provided at its distal end with an inflatable balloon and adapted to receive multiple injected liquid fluid flows passing therethrough, a radiofrequency radiating antenna and multiple thermocouples, the

radiating antenna being submerged within a fluid flow, characterized in that

said radiating antenna is adapted to be submerged within a flow which proceeds through a central channel surrounding said radiating antenna towards a distal end of said catheter and passes from said catheter through a first opening into an organ to be treated, while flowing back into said catheter towards a proximal end thereof through a second

18

separate opening of a side channel surrounding power supply cables of said
thermocouples.

ends of said thermocouples are adapted to project out of said second opening,
being thus deflected outwards into the organ when said balloon is inflated by injecting a
fluid through a second side channel and third opening, whereby the outwardly deflected
ends of said thermocouples are adapted to come into tangential engagement with a wall of
the organ irradiated by said antenna.

3. A radiating device including a catheter provided at its distal end with an
inflatable balloon and adapted to receive multiple injected liquid fluid flows passing
therethrough, a radiofrequency radiating antenna and multiple thermocouples, the
radiating antenna being submerged within a fluid flow, characterized in that

said radiating antenna is adapted to be submerged within a flow which proceeds
through a central channel surrounding said radiating antenna towards a distal end of said
catheter and passes from said catheter through a first opening into an organ to be treated,
while flowing back into said catheter towards a proximal end thereof through a second
separate opening of a side channel surrounding power supply cables of said
thermocouples,

ends of said thermocouples are adapted to project out of said second opening,
being thus deflected outwards into the organ when said balloon is inflated by injecting a
fluid through a second side channel and third opening, whereby outwardly deflected ends
of said thermocouples are adapted to come into engagement with a wall of the organ
irradiated by said antenna.

4. A radiating device for irradiating an organ comprising:

a catheter provided with an inflatable balloon and including a central channel, first
and second side channels, and first, second, and third openings;

an antenna, situated at a first end portion of the catheter, the antenna adapted for
being submerged in a first fluid that flows through the central channel surrounding the
antenna towards the first end portion of the catheter, passes from the catheter through the
first opening, and flows back into the catheter towards a second end portion thereof
through the second opening; and

a plurality of thermocouples, having ends, the plurality of thermocouples
extending along the first side channel of the catheter, each of the ends of the plurality of
thermocouples adapted to project out of the second opening and to be deflected outwards
when the balloon is inflated by injecting a second fluid through the second side channel
and the third opening.

wherein the deflected ends of the plurality of thermocouples adapted to contact a
wall of the organ irradiated by the antenna.

5. A radiating device for irradiating an organ comprising:

a catheter provided with an inflatable balloon and including first and second
channels and a first opening;

an antenna, situated at an end portion of the catheter, the antenna adapted for
being submerged in a fluid that flows through the first channel surrounding the antenna
and into the organ; and

a plurality of thermocouples, having ends, the plurality of thermocouples
extending along the second channel, each of the ends of the plurality of thermocouples
projecting out of the first opening and being deflected outwards when the balloon is
inflated.

wherein the deflected ends of the plurality of thermocouples are adapted to
contact a wall of the hollow organ irradiated by the antenna.

6. A radiating device for irradiating an organ comprising:
a catheter provided with an inflatable balloon;
an antenna, situated at an end portion of the catheter, adapted for irradiating the
organ;
a channel for providing a fluid to the organ; and
a plurality of thermocouples, having ends, the plurality of thermocouples
extending along the catheter, each of the ends of the plurality of thermocouples being
deflected outwards when the balloon is inflated,
wherein the deflected ends of the plurality of thermocouples are adapted to
contact a wall of the organ irradiated by the antenna.

7. A radiating device for irradiating an organ comprising:
a catheter provided with an inflatable balloon and including first and second
channels and a first opening;

an antenna, situated at an end portion of the catheter, the antenna adapted for
being submerged in a fluid that flows through the first channel surrounding the antenna
and into the organ; and

a plurality of temperature sensing devices, having ends, the plurality of
temperature sensing devices extending along the catheter, each of the ends of the plurality
of temperature sensing devices being deflected outwards when the balloon is inflated,
wherein the deflected ends of the plurality of temperature sensing devices are
adapted to contact a wall of the organ irradiated by the antenna.

8. A radiating device for irradiating an organ comprising:
a catheter provided with an inflatable balloon;
an antenna, situated at an end portion of the catheter, for irradiating the organ;
a channel for providing a fluid to the organ; and
a plurality of temperature sensing devices, having ends, the plurality of
temperature sensing devices extending along the catheter, each of the ends of the plurality
of temperature sensing devices being deflected outwards when the balloon is inflated,
wherein the deflected ends of the plurality of temperature sensing devices are
adapted to contact a wall of the organ irradiated by the antenna.

9. A radiating device for irradiating an organ comprising:
a catheter;
an antenna, situated at an end portion of the catheter, adapted for irradiating the
organ;

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a channel, within the catheter, adapted for providing a fluid comprising a
cytotoxic substance to the organ; and
a plurality of temperature sensing devices, having ends, the plurality of
temperature sensing devices extending along the catheter, each of the ends of the plurality
of temperature sensing devices adapted for being deflected outwards after the catheter is
inserted into the organ,

wherein the deflected ends of the plurality of temperature sensing devices are
adapted to contact a wall of the organ irradiated by the antenna.

10. A radiating device for irradiating an organ comprising:
a catheter, including a channel adapted for providing a fluid to the organ;
an antenna, situated at an end portion of the catheter, adapted for irradiating the
organ; and
a plurality of temperature sensing devices, having ends, the plurality of
temperature sensing devices extending along the catheter, each of the ends of the plurality
of temperature sensing devices being deflected outwards after the catheter is inserted into
the organ,

wherein the deflected ends of the plurality of temperature sensing devices are
adapted to contact a wall of the organ irradiated by the antenna.

11. A radiating device for irradiating a cavity comprising:

a catheter;

an antenna, situated at an end portion of the catheter, for irradiating the cavity;

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23

a channel extending along the catheter and adapted for providing fluid to the cavity; and

a plurality of temperature sensing devices, having ends, the plurality of
temperature sensing devices extending along the catheter, each of the ends of the plurality
of temperature sensing devices being deflected outwards after the catheter is inserted into
the cavity.

wherein the deflected ends of the plurality of temperature sensing devices are adapted to contact a wall of the cavity irradiated by the antenna.

14. The radiating device as recited in claim 13, adapted for fluid flow by the antenna and into the cavity.

16. The radiating device as recited in claim 15, adapted for fluid flow by the shielded cable and the antenna and into the cavity.

18. The radiating device as recited in claim 11, adapted for flow of a conditioning liquid.

19. The radiating device as recited in claim 11, adapted for flow of a solution of a selective cytotoxicity substance.

20. The radiating device as recited in claim 11, wherein the antenna is adapted
for a frequency range of 900-1000 MHZ.